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What to do

AND

How to do it

FOR THOSE WHO

PAINT, VARNISH

AND KALSOMINE

PUBLISHED BY

JOHN L. WHITING & SON,

132-146 Oliver Street,

BOSTON, MASS.

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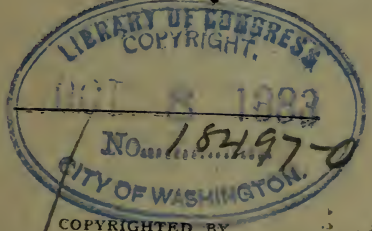

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WHAT TO DO AND HOW TO DO IT.

REMOVING SPECKS FROM VARNISH.

There are but few who go to work the right way to pick out the motes from the varnish when they apply it to a panel, most painters waiting to do this until the varnish has flowed down level. To properly remove bits of hair, lint etc., first procure a finely sharpened whalebone, or tie to a stick a thin strip of quill; then, when the first "dressing" of the varnish has been given, let it set for a moment to flow, that all the specks may be seen, and with the "picker" as above described, carefully remove them, and proceed to dress the varnish for the finish. It may be that a few specks will remain, or are added by the last dressing. If so, it is a simple matter to pick them out. If *all* the specks are removed after the dressing has been done, there is sure to be a mark left where they came out, but by taking away all that can be seen on the first dressing, the job will come out clean and free from all picker-marks.

GRINDING PAINT.

The introduction of ready-prepared colors into the carriage and car paint shop was certainly a boon, not only to the workman and the boss, but to the poor apprentice boy who was compelled to labor day after day in turning an old worn-out paint mill. However, the mill is a necessity, and there is yet work for the boy in that line, but it should be the duty of some one in the paint shop to supervise the running of that machine, and if possible relieve the apprentice of some of the drudgery imposed upon him. One of the most important features of the ordinary "Harris Mill" is the beveled gear. They become worn, and do not mesh together properly, or the lower platen is forced upward by becoming worn, and the bevel gears come together too tight, causing very hard turning. The step or bottom end of the vertical shaft requires frequent oiling, as well as the bearings of the crank-shaft. The scraper must be nicely adjusted, or it will press too hard on the edge of the platen, and cause the same to turn hard. The feed grooves must be filed out every few weeks, and this is a very particular piece of work, which should not be intrusted to a boy or inexperienced workman. For the grooves must not run down to the extreme edge, or be made too large or deep. When the feed grooves are worn out, the paint will not run down to the exit, and consequently the time taken for running out will be greatly extended, besides giving extra labor. It frequently happens when quick color is being ground, that some of it dries hard upon the

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SOMETHING ABOUT BRUSHES.

If, as John Wesley said, and who can doubt it, "Cleanliness is next to godliness," brush-makers are great benefactors of the human race. It is hardly too much to assert that without brushes, cleanliness, as it is now understood in civilized society, could not exist. Not only our persons, and the clothes we wear, but the houses in which we live, the ships in which we sail, are largely dependent, for cleanliness, on the faithful use of brushes. Printing has been called "The art preservative of all arts." If less can be claimed for the art of brush-making, it is at least true that it is an art preservative. Everything in nature tends to decay, and that remarkable tool the paint-brush, in all its many forms and varieties, has doubtless done more to check that tendency than all other tools, machines and instruments of man's devising. In addition to strict utility, brush-making, as an art, furnishes the indispensable tools for that art which ministers more fully than any other to the sense of the beautiful. An unpainted house is painful to look at, and without his brushes, neither the house-painter nor the artist who paints the greatest masterpiece would be able to do his work.

There are few if any of the useful arts more difficult than brush-making for a novice to engage in with success. In the whole history of the trade in this country, no one has ever succeeded who was not himself a practical brush-maker. This fact might serve as a warning in the future, and had it been heeded in the past would have saved many from misfortune and serious losses.

The capital required to carry on this business is larger in proportion than is needed in almost any other kind of business. Especially is this true in the manufacture of the staple brushes—Paint, Varnish and Whitewash.

The material required consists mainly of hogs' bristles, and is quite expensive. The chief source of supply is Russia, and St. Petersburg is the great market of the world. Large quantities are also obtained from Poland, Germany, Belgium and France; and the immense pork-packing establishments of this country furnish large supplies, but of inferior quality. The European hogs from

fast revolving platen, and is chipped off in a fine spray of grit by the scraper into the cup of clean paint, necessitating at times a complete re-grinding. To overcome this difficulty, the edge of the revolving platen should be turned off leaving only a narrow rim, say one-quarter of an inch in width, a job that any machinist can quickly do. By thus attending to the mill, keeping it clean, and regulating the pressure upon it to correspond with the strength of the apprentice boy, one of the most distasteful tasks of the paint shop will be made more pleasant, and the merry whistle of the workmen as they come to work will be an ample compensation for the labor expended.

TO BRIDLE A BRUSH.

Nearly all the brushes used for plain painting require an extra binding or "bridling," that is, the original binding is extended out over the bristles about one-half their length, in order to prevent them from spreading as wide as they would otherwise. There are several ways of putting on this bridle. One is to wrap a stout cord around as far as desired, and then secure it to the handle, but a better way is to take a piece of muslin just large enough to go around the brush, and wrapping it around, tie it at the place where the binding is to come, then turn it back toward the handle, as you would turn a coat sleeve or stocking; and fasten all securely by tying a cord around the handle, cut off the surplus muslin, and a neater binding could not be desired. There are several patent brush binders in market, which serve a very good purpose, and those I have seen deserve at least a trial.

PERCENTAGES IN MIXING.

I have frequently been asked by workmen what the meaning of percentage was, when they were told to add, say: 5 per cent. of a certain material to a mixture, and I therefore thought it quite proper to make particular mention of percentages.

Five per cent. means simply five parts in one hundred. If we are told to add 5 per cent. of oil to a quantity of paint, we must first calculate the amount of paint. Supposing we are to make 20 gills of color, or 5 pints, then 1 gill would be 1 part of 20, or 5 parts of 100, which would be 5 per cent. Therefore 1 gill in 20 gills, or 1 pound in 20 pounds, would be 5 per cent.

Ten per cent is ten parts in one hundred, and means consequently, as above shown, 2 gills in 20, or 1 gill in 10 gills.

TO MAKE A PUTTY THAT WILL STAY WHERE PUT.

The greatest trouble with putty for almost any purpose, is its liability to dry hard and chip out, and especially is this the case in

which bristles are obtained live in a semi-wild state, are thin and long-legged, being almost entirely without fat, and are not killed when young, as they are here.

Russian bristles run perfectly uniform; one bundle represents the whole package or cask, they being inspected by government officials who reject all stock not up to the standard, and there are but few grades of them. The best quality is called *Okatka*, and is from five to eight inches in length. The next quality is called

Firsts, and is from four to six inches in length. These two grades are stiff bristles. Length, color and stiffness are the characteristics on which the value of all bristles depends.

The third quality is called *Suchoys*, is from four and a half to five inches in length, and is without stiffness. The fourth quality is called *Seconds*, and is essentially like *Suchoys*, the principal difference being in length, the length running from three and a half to four and a half inches.

German, Polish, and bristles from some other countries, run

the plate glass of hearses and carriages. To fully overcome the trouble, take a piece of velvet or plush, and pull out the warp, which will leave the woof in the form of short threads. Mix this intimately with your putty, and it will act like hair put in plaster, preventing any disintegration.

FASHIONABLE COLORS.

Shell Pearl.—Add carmine to white.
Shrimp Pink.—Add carmine to white.
Old Gold.—Add orange chrome to yellow ochre.
Burgundy.—Add asphaltum to any bright lake.

THE USE OF WHITING IN THE PAINT SHOP.

Whiting, *i. e.* pulverized chalk, is of far more use in the shop than many suppose, although many who pretend to know all about it will not use it. For making putty for bodies or gears, one-third whiting added to dry lead, then mixed with Japan and rubbing varnish will give the most satisfactory results, for such putty is not liable to shrink or swell.

Whiting may be used in making a glazing or plaster for filling old cracks, as follows: Take equal parts of English filling, dry lead and whiting, and mix with equal parts of Japan and rubbing varnish, then add one-half the quantity of rye flour paste to the paint, and stir all together into a thick mush-like consistency, and spread it on with an old brush. Allow it to remain a few minutes, then scrape it down level with a broad bladed putty knife, and when dry rub down with pumice stone as usual.

Whiting is an excellent adulterant for vermilion, as it has no coloring quality. It adds quantity only, and a small quantity of vermilion may, by the addition of whiting, be made to cover a gear. Besides it makes American vermilion work easier, cover better, (as a heavier coat can be applied) and, so far as durability is concerned, I have yet to learn of any injurious effects.

Whiting is useful for preventing gold leaf or bronze from adhering to any varnished surface.

It is also extensively used in cleaning glass, and scouring metal surfaces.

What other uses can be made of WHITING in a paint shop, these pages will tell.

GOLD BRONZE.

There seems to be an acid in English varnish which acts upon gold bronze, bringing out verdigris, and causing the bronze to turn a dark green when that varnish is applied without an intermediate coating. American varnish on the other hand does not affect

very irregular, and require the greatest caution and best judgment in buying. They are in greater variety. *Leck* is the name applied to a large class of them, and *Spitz* is applied to another large class. There are a number of other names, each applying to a large class. French bristles are the finest in the world, and are better adapted for artists' brushes, varnish brushes, etc., than any other kind. They run about as uniform in quality as the Russian, and are perfectly dressed.

Preparing or dressing the bristles is the foundation of the trade, without a thorough knowledge of which it is impossible to make good working brushes. They must be carefully washed, bleached, combed and dragged. It is a singular fact that we are dependent upon the dirtiest of animals to produce articles indispensable to neatness in all civilized countries, and there is no good substitute for bristles in the world.

The first process in dressing is very tedious, and requires skill and expedition. The bristles are first soaked in hot water, and then rubbed with soap on a rough stone or iron wash-board, which thoroughly cleanses them from dirt. They are then tied up tightly in bundles, to prevent warping and to take out their natural bend or crook, and taken to the drying-house. Previously to their being tied into bundles and dried they are, however, put for one night in the bleaching-house and bleached with brimstone, which gives the white bristles a brighter appearance. When dry, they are sent to the combing-room, where the colors are sorted out, and they are combed, dragged and mixed. To comb them they are worked through a comb, a sort of hatchel, which removes the loose wool adhering to the bristles. They are then dragged, which consists of pulling out the bristles in the bundle and sorting them into different lengths, after which they are manipulated on the comb by a process of lapping, so as to become thoroughly mixed. They are then ready to be put into brushes. For paint and similar brushes, they are left as they are; but for hair, cloth, tooth brushes, etc., they are cut to lengths as required.

Whalebone is never used in paint brushes, etc., notwithstanding the conviction of many painters to the contrary, of which idea they probably will never be rid.

bronze in the same manner, and it is therefore generally used directly upon the bronze. But to prevent the fading or darkening of gold thus applied, I have found it an excellent plan to first pencil varnish the bronze with best French shellac varnish, which dries in ten minutes, then apply any varnish you desire, and no discoloration takes place.

TO MAKE A STRIPING PENCIL SHORTER WITHOUT UNFITTING IT FOR ITS ORIGINAL USE.

Take a piece of writing paper about ¾ of an inch wide, and wrap it around the pencil in the same way as in making a lighter, leaving the lower end rather loose, the upper end tied. By this method a pencil may be made as short as desired, and when done using remove the wrapper and grease the pencil before putting it away, and it will be as good a striping pencil as ever.

To make a broad stripe where the pencil is not large enough, tie two or three pencils together, using splints to fill the space between the quills. It does not always pay to buy a broad pencil for only one job, and by doing this a pencil may be made to suit the work in hand and then be separated as before.

SELECTING PENCILS.

Striping pencils should never be put in the mouth and drawn between the lips while wet with warm spittle, to enable one to judge of the shape, or point, for the warm spittle causes the hair to crinkle, and in some cases the pencil will be ruined. If you will press the hairs between the thumb and finger to flatten the pencil, then draw it downward, holding it up to the light meanwhile, you will be able to judge of its point. If the hairs appear to gradually thin down, yet a square end is formed, you may be sure of a good point, but if the hairs appear ragged, no two of a length, reject it as a poor one. The ends of striping or lettering pencils should never be cut across to square them, for the blunt end thus made makes a poor end, and good work can never again be done with that tool.

PAINT RECEIPTS, AND ITEMS OF INTEREST.

How to produce crimson.—First paint a ground of light English vermilion, to color-and-varnish; then rub it down smooth with pulverized pumice stone and water, and lay on a heavy coat of carmine glazing, made by grinding carmine and varnish, or, if you wish to make a cheaper job, use Munich lake in place of carmine.

When paint, particularly lead color, stands exposed to the air for any considerable length of time, if there be much oil in the mixture, it becomes "fatty" and will not work or dry well. This is owing in part to the evaporation of the spirits, and the partial

Our house was established in 1865. We do not claim to be an old house in any sense of the word—certainly not old fogy. At first doing a small business under adverse circumstances, we have steadily and rapidly increased our business until now we are by far the largest manufacturers of brushes in the United States, or that ever has been. We are also the largest manufacturers of brushes for the use of Painters, Varnishers, Kalsominers, etc., in the world. We are the largest consumers of bristles in the world. One quarter of all imported into this country are bought and used by us in the

manufacture of our goods, besides a large fraction of the domestic product. Buying as we do, so heavily, we buy at lower prices than other manufacturers. This fact, with the saving that we make in consequence of our patents and machinery, enables us to produce and sell goods at lower prices than others can make and sell, of equal quality. Our success in business can only be accounted for on the ground of the superiority of our goods and the prices at which they are sold. So well known are our brushes now, and their quality so appreciated, both by buyers and other brush manu-

oxidation of the oil. Quick color is not so apt to become fatty, but all paint is more or less injured by being thus exposed, and should always be closely covered.

Tea-green is a color frequently called for, and one which makes a fine color for tea-carts. (?) It is made by adding to chrome green raw umber and blue. The proportions cannot be well defined, for there are so many shades of tea.

GREASING STRIPING PENCILS.

When putting away striping pencils, they should not be greased with oil, for there is an acid or an alkali in some oils that burns or rots the hairs. They should be kept in a covered box, well greased with tallow and sweet oil mixed together, which will not harden in cold weather. Artists' pencils of all kinds may also be kept in good order if greased with this mixture, which is easily rinsed out with turpentine.

"THE KING" VARNISH BRUSH.

"It is seldom that we so readily commend a new tool as, in this instance, we do the patent varnish brush of Messrs. John L. Whiting & Son, Boston, Mass., which they are now supplying under the name of "The King." It consists of an oval brush bound with brass, and having its center well filled with bristles. The latter is a new and certainly very desirable feature, as no accumulation of dirt or varnish gum can find a resting place. The bristles are of the best quality, possessing all the desired elasticity, and appear to be more firmly held in place than is the case with many oval brushes we have used. The bristles are evenly distributed throughout the brush, and are not compressed into a solid ring or ferrule, around a so-called reservoir for varnish or paint in the center of the brush. These reservoirs have never been a success, and the absence of one in "The King" leads us to particularly admire it, for our experience teaches us that a brush with a solid bristle center will carry varnish better and keep in better order than one having a central space or reservoir. Besides this, such a brush will wear more evenly. The brush is particularly adapted for varnishing large panels or gears, and well merits a trial by varnishers."

F. B. GARDNER.

TO CLEANSE A PENCIL FROM HARD PAINT.

To soften a sable or camel's-hair striping pencil when it has been allowed to dry up hard with paint, put some turpentine into a shallow dish, and set it on fire. Let it burn for a minute until the spirits are hot, then smother the flame, and work the pencil between the fingers, dipping it frequently into the hot spirits which will quickly soften and remove the paint.

facturers that, in their endeavor to make sales, other manufacturers frequently recommend their own goods as being "as good as Whitings'." The various attempts made to match our styles and imitate our goods, have been silent but strong assurances of the excellence of our brushes.

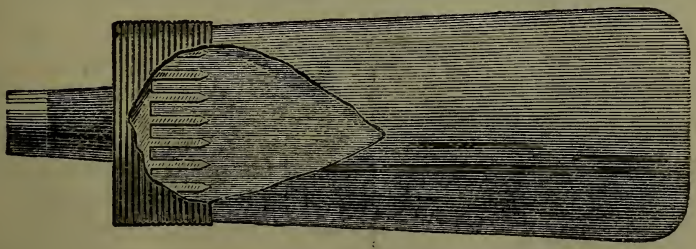
In the selection of a brush, the consumer needs to be more careful than in almost any other article. A poor brush is the most perfectly useless thing of which we can think. It not only costs the user the price paid for it, but loss of material in which it has been used, a spoiled job generally, and lost time and excited temper. It is therefore of greatest importance to the consumer to buy only from reliable houses who have an established reputation for making good brushes, and who are interested in maintaining that reputation.

Only a few years ago it was thought that perfection had been attained, or nearly so, in the process of making, as well as in the style and quality, of the leading staple brushes used by painters, kalsominers, and masons. This opinion, however, has been rapidly changing, until now it is universally acknowledged that the principles and methods employed in the manufacture of

WHITINGS' PATENT BRUSHES

are great improvements over all other methods heretofore devised, and, taken together, mark the greatest step ever taken in the art of brush-making. Their novelty and entire originality have never been called in question.

The Full-Center Patent Paint Brush.



[Trade Mark.]

The original full-center patent has several advantages over the

PAINTING FLOORS.

For the covering of floors we should select only that paint which contains earthy coloring substances, and no lead, as all paints containing the latter wear off easily.

An oil-paint which is easily rubbed off, can safely be considered to contain lead. This is generally added because of its density and its being more easily applied than most other bases.

Even varnish that has been prepared with litharge is objectionable on account of its being too easily worn.

Two coats of paint should cover a floor nicely, and one coat should never be applied before the other is perfectly dry.

Yellow ochre, mineral paint, or either of the other ochres will be found to out-wear lead paint, and no more oil should be used than is sufficient to make the paint slightly elastic.

THE CARE OF ARTISTS' TOOLS.

To say that the delicate and expensive tools and appliances of the shop or studio should be well cared for, is a truth which every painter will acknowledge; but how often we see carelessness and neglect instead. Pencils drying up, palettes daubed with patches of color, tubes scattered here and there, a broken mahl-stick, a dilapidated easel, are far too common sights. It is easy to clean a palette at the proper time, to cleanse and grease a pencil so that it will be ready for use when needed, to keep one's place of business tidy and attractive to the eye of a refined and observant visitor. "Keep thy shop, and thy shop will keep thee," is one of the wise maxims of prudent Ben. Franklin; and he meant that the shop should be kept in order, that everything pertaining to it should be in perfect condition and instant readiness for use. But if tools are left to go to ruin, as they certainly will in an untidy place, an undue proportion of the profits inevitably goes to waste. Order and cleanliness go far to promote one's self-respect, and to win the confidence and respect of friends and patrons.

PAINTING MUSLIN.

Whoever attempts to paint on muslin without the requisite knowledge, is likely to make sorry work of it, but the following hints, carefully followed, will be sufficient to insure a satisfactory job. Stretch the muslin tight and tack it upon any smooth surface, such as a wall or partition, and size it carefully with a solution of one-fourth starch or paste in three-fourths water, thoroughly mixed, letting it remain till nearly dry before beginning the work of lettering. If paste is used, add a small quantity of glue or glycerine. To prepare the paint so that it will not spread or strike through

old style of manufacture, and especially over brushes having butts or disks of wood or other substances inserted within the ferrule, but having no mechanical connection with the bristles :—

1. It is much stronger ; as much force being used in driving the handle as is required in the old method. A very much extended surface of the handle is brought in contact with the bristles. The butts of the bristles are saturated with the best of brush-maker's cement, so that the holding power of both the pressure and cement

is proportionately increased. Practically, the bristles and handles are grown together.

2. The hole or bore in the center of the brush, a necessity of the old method of manufacture, being entirely obviated, the brush cannot "swallow-tail," or wear out in the center, but wears up evenly until it is worn out.

3. It will be noticed that the bristles are evenly distributed throughout the brush, and not compressed into a solid ring or shell between the handle and ferrule around a reservoir for paint in the center of the brush. Reservoirs have never been a success in other

the muslin, mix the pigment with carriage rubbing varnish to a stiff paste, and dilute with turpentine till it works freely with the pencil. Artists' fitches are best for coarse canvas, and hair pencils for fine muslin. If black is used, mix it with one-third brown japan, and two-thirds varnish, and thin with turpentine as usual, to dry with a little gloss. If reds are used put only as much oil in them as will prevent their drying too dead or flat. Wetting muslin or canvas with clear water will prevent the spreading of the paint on the edges of the letters, but it is less satisfactory than the method given above.

If the canvas is to be painted all over, it is a good plan to add a small quantity of soap to render the paint more flexible.

BLACKBOARD PAINT.

The paint for blackboards should have rather a rough surface so as to take chalk readily, and to make a good job follow the directions given below. Take one quart of shellac varnish, three ounces of pulverized pumice stone, four ounces of pulverized rotton stone, and four ounces of lampblack; mix the three last-named ingredients, moisten a portion at a time with the varnish, and stir all well together. Then add the remainder of the varnish, and it is ready for use. One quart will furnish two coats for eighty square feet of board, not previously painted. It dries quickly, and the board may be used in an hour.

IMITATION OF STAINED GLASS.

Stained glass is just now extremely popular, but as the real glass is expensive, many imitate it with coloring substances. A good imitation may be made by using madder lake for red, permanent blue or ultramarine for blue, gamboge for yellow, and lake and gamboge for orange. These colors are transparent, and should be mixed in equal proportions of pale linseed oil, pale varnish and turpentine. The colors to be purchased in collapsible tubes are best. First, stripe the glass with black in any desired manner to imitate the lead frame of the real article, about three-sixteenths of an inch in width; then put on your colors, making each panel different, and using a small sash tool to stipple the paint. The addition of a little white-lead will make the colors work easier, and render them slightly opaque.

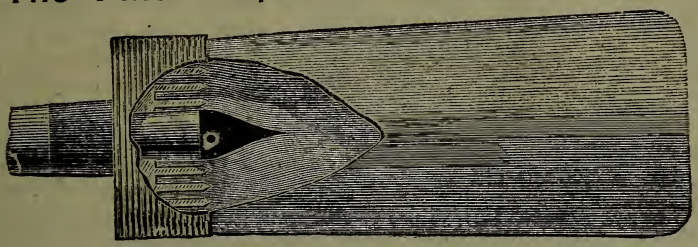
Diaphanie is the name given to a method of imitating stained glass, which is extensively used. It consists in the use of parti-colored transparent paper, which is fixed upon the glass with size, and then varnished.

KALSOMINING.

To do a good job of kalsomining, one must fully understand the

kinds of brushes, and have only been tolerated in paint-brushes heretofore from necessity. As a consequence of this peculiarity, the brush is a little more mellow than other kinds of brushes, allowing a little more elasticity or spring near the ferrule; and, in consequence, will wear up shorter before being laid aside as a "stub."

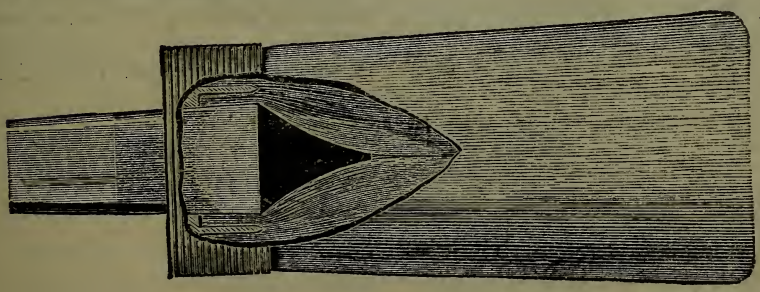
The Patent Open-Center Paint Brush.



[Trade Mark.]

This brush is a modification of the original full-center brush, and by some considered an improvement. The plug, or section of the old-style paint-handle, driven into the center, acts on the principle of the wedge, and in the *opposite direction* from the wedges of the handle, and thus holds the handle and bristles within the ferrule, if possible, more securely. At the same time, the central space being very small, the brush retains all, or nearly all, the advantages of the full-center brush.

The Combination Patent Brush.



[Trade Mark.]

This brush combines the wedge principle of the old-style paint-

business. Any one may be able to mix a little size with whiting, and daub it over a wall, but to have a correct formula for both size and kalsomine is a very different thing. My receipt is the result of eighteen years experience, and can be depended upon. It is as follows:

To make size that will neither scale nor rub up under the kalsomine, take one pound of good bar soap, one pound of artists' white glue, and two pounds of pulveized alum; dissolve the three separately, each in one quart of boiling water; strain the soap and glue into a bucket, and add the alum slowly, so that it will not effervesce too much; then add one quart of clear cold water, and the size is ready for use. This should size 500 feet of surface, if put on properly.

To make kalsomine, take 15 pounds of good Paris white, mix it up with lukewarm water, then add one-quarter pound artists' white glue, dissolved in hot water; strain through a fine sieve; dissolve one-quarter pound soap in hot water, and one-half pound alum in cold water, and add the soap and alum to the white. One coat will cover perfectly on either new or whitewashed walls, leaving a glossy surface when the size is dry, and a beautiful egg-shell gloss to the kalsomine. It is always best to use the proper kalsomine brush, although it may be put on with a whitewash brush.

TO MAKE LIME WHITEWASH.

Whitewash that will not rub off can be made by simply adding common molasses to the slaked lime. Say one quart of molasses to five gallons of whitewash.

OIL COLORS AND FLATTING FOR ARTISTS IN OIL AND DISTEMPER.

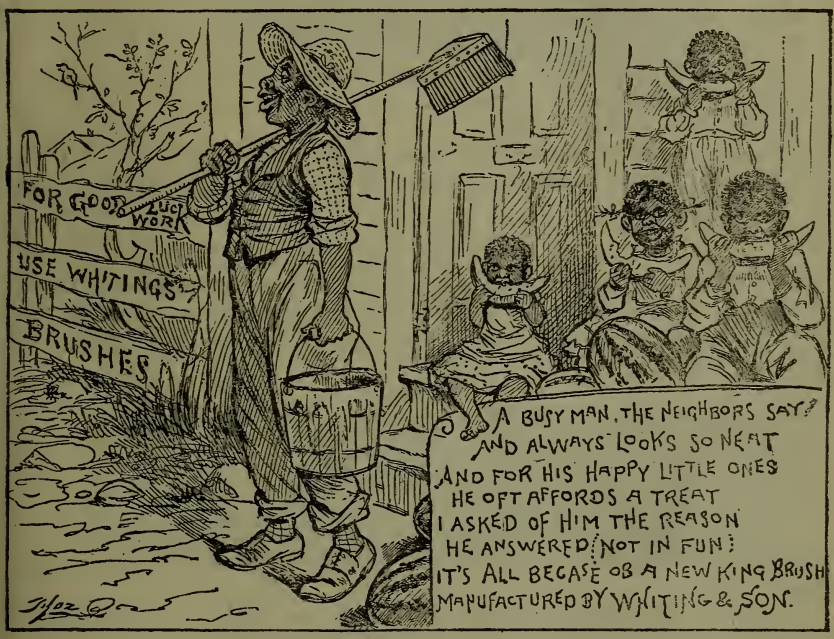
To produce decorative tints a good share of judgment must be exercised, unless the workman has at his disposal the list of tints given below, which will not only be found correct, but in sufficient variety to cover ordinary demands.

Taking white-lead as a base, we can produce pale tints of the following, in oil:

Buff.—White, yellow ochre, burnt sienna.
Blue.—White, Prussian blue.
Cream.—White, medium chrome yellow.
Drab.—White, umber, either burnt or raw.
Fawn.—White, raw sienna, vermilion.
Lilac.—White, vermilion, ultramarine.
Lavender.—White, vermilion, Prussian blue.
Pink.—White, crimson lake.
Pink.—White, vermilion.
Pink.—White, Indian red.

brush with the principle of our original paint-brush. The base or butt, with its pins or wedge-shaped projections, is entirely separate from the handle, and is made with a hole through it of any desired shape, to correspond with the shape of the handle which fits into it. As a matter of fact, we use this method mainly in the manufacture of varnish-brushes.

The objection to the open space in the center is obviated by its oval or flat shape, and also by its small size, being



much smaller than is usual in ordinary varnish-brushes. Without doubt, varnish-brushes made in this way are stronger than any others, except some high-cost brushes with which extraordinary pains are taken in the manufacture. It is immeasurably stronger and superior to varnish-brushes made with a disk or butt inserted in the ferrule, but without any patent *mechanical* connection with the bristles.

Nearly all our varnish-brushes, including the cheapest lines, *are made under this patent.*

Peach.—White, vermilion, yellow ochre.
Salmon.—White, vermilion and yellow, or yellow ochre.
Straw.—White, chrome yellow.
Stone.—White, yellow ochre, umber.

DEEP TINTS.

Brown.—White, Prussian blue, Venetian red.
Brown.—White, purple brown, lake.
Brown.—White, indigo, yellow ochre, vermilion.
Chocolate.—White, lake, black, purple brown.
Green.—White, yellow ochre, indigo.
Green.—White, sienna, Prussian blue.
Green.—White, yellow and Prussian blue.
Green.—White, chrome green.
Lead Color.—White, black.
Orange.—White, orange chrome, lake.
Violet.—White, vermilion, Prussian blue, lake.

DISTEMPER COLORS.

The same pigments either as powder colors or prepared ready ground in water, may be used as in the examples above given, with the following additions. The colors here named are not so suitable for oil work.

TINTS.

Pink.—White, rose pink.
Orange.—White, Dutch pink, lake.
Gray.—White, celestial blue, rose pink.
Gray.—White, blue, black.
Straw.—White, Dutch pink.

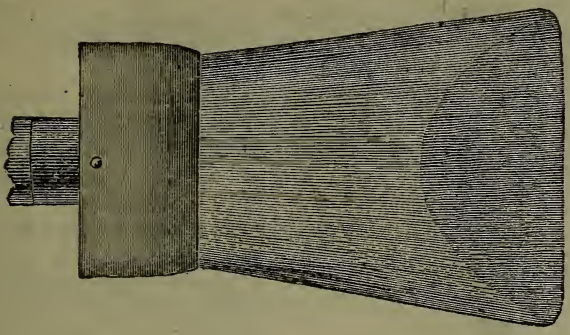
Either whiting or dry white-lead may be used as a basis for distemper tints.

In addition to the tints there are several varieties of "self colors" or tones, obtainable by admixture with white, viz.:

Green (sage).—White, Antwerp blue, ochre.
Green (pea).—White, Brunswick green.
Green (duck's egg).—White, ultramarine, chrome green.
Green (olive).—White, Oxford ochre, Prussian blue.
Blue.—White, Antwerp blue.
Blue.—White, indigo.
Purple.—White, ultramarine, lake.

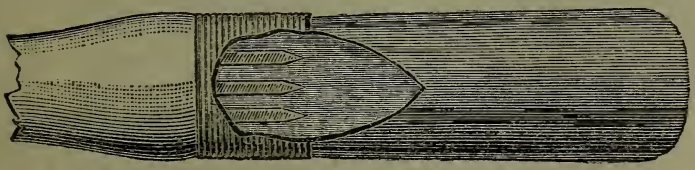
In all cases the proportions must be determined by the requirements of the decorator, and are to be decided by the hangings or furniture. The strength or body of each pigment should also be taken into account.

The King Patent Chiseled Varnish-Brush.



This brush is made on our full-center patent; is brass-bound, and the greatest pains taken in the selection of stock and making. It now stands at the head of this class of brushes, being especially adapted to piano, car and coach work.

Patent Full-Center Sash-Tool.



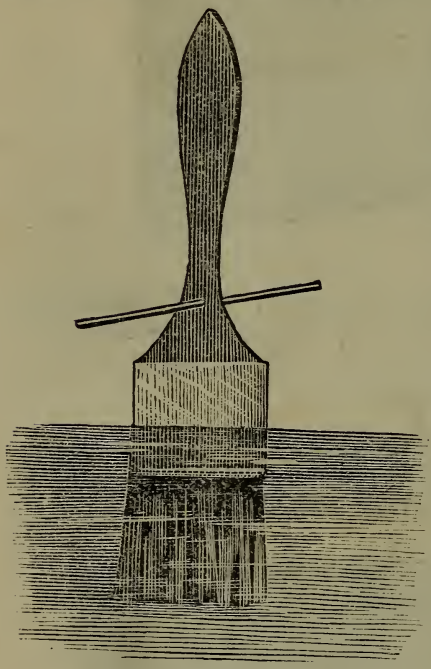
[Trade Mark.]

All the merits of the full-center patent are embodied in this brush. Without exception, it has given better satisfaction than any other sash-tool heretofore manufactured. All of our sash-tools will stand the severest tests, and will wear up nearer the ferrule than any other sash-tools manufactured. Dealers and consumers will please notice that all of our sash-tools, labeled or stamped French, are made of pure French bristles; this is not the case with many now in the market stamped French.

All of our full-center sash-tools are now made with brass ferrules, a great improvement over those made by any other manufacturer.

KEEPING VARNISH BRUSHES WHEN NOT IN USE.

It may be well enough, where varnish brushes are used for common work, such as house-work or farm implements, to keep them suspended in raw linseed oil, but no fine varnishing can be done with tools kept in that manner.



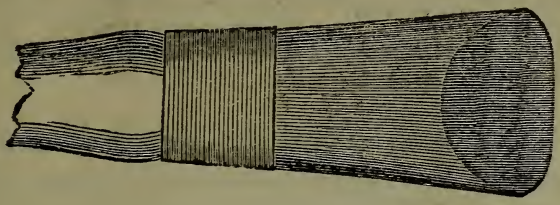
The carriage varnisher would make sorry work of it, if his brushes were taken from a bath of oil when about to varnish a job. "Pitting," "enameling" and a dozen other troubles arise from having oil or turpentine come in contact with the varnish brushes, and in no place are these of so much consequence as in the carriage shop The usual method of keeping varnish brushes, is to suspend them by a wire running through a hole in the handle, (as shown in the engraving,) within a tight covered tin box, so suspended that the brush may hang in varnish, just above the tin binding. The same varnish as that in which the brush is commonly used is considered the best for that purpose, so that no foreign substance will become incorporated with that put upon the work.

There are several good brush-keepers in market, and these are quite inexpensive. The best and cheapest liquid in which to keep brushes suspended is carriage finishing varnish made with *no dryer in it*. Any varnish manufacturer will supply this, and it will not skin over or thicken in a very long time.

Varnish brushes should never be rinsed in oil or turpentine, but if by accident they get dirty, work them out on some unimportant panel. If the brush has become dirty by an unlucky fall to the floor, hold it at an angle towards the floor, in such a manner that when turpentine is poured upon it, the spirits will not run up into the hilt of the brush, but will flow off, carrying with it the greater part of the dirt. After rinsing in this manner, strike the tin binding several sharp raps upon some hard substance, when the recoil or spring of the hair will cleanse the brush of turpentine. Then rinse in varnish.

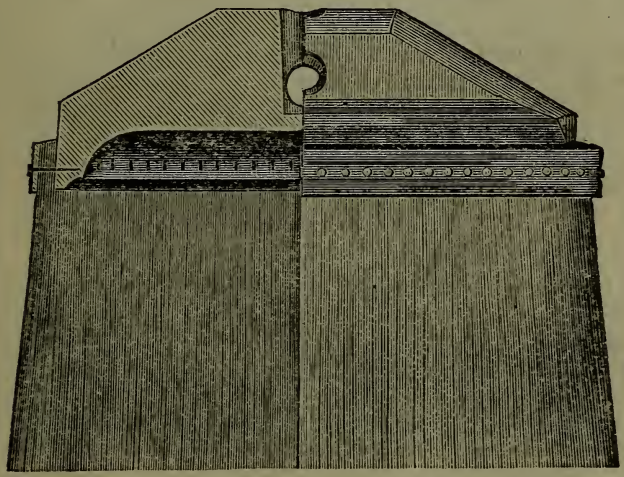
In case of a tin-handled brush ; care should be taken not to per-

Patent Oval Chiseled Sash-Tool.



Like all our lines of sash-tools, this is made on our full-center patent, and is entirely unique. It is made of pure French bristles, and supplies a demand which has never before been satisfied.

The Patent Dictator and Sterling Whitewash-Brushes.



These brushes possess two entirely new features, both practically useful, which are applied to the regular leather-bound whitewash-brushes. The open space in the block or head of the brush serves as a temporary receptacle for the whitewash or other liquid, and therefore renders the brush less likely to leak or drip when being used; while, upon dipping the brush, or reversing its position, the liquid will readily run out. The other original feature adds greatly

forate the tin, for by so doing there is a liability that varnish or oil will thus be admitted to the cement and soften it, thereby causing the hairs to fall out.

If preferred, a string may be tied around the handle, having a loop to catch the suspending wire.

PAINTING A CARRIAGE OR HEARSE WHITE.

There seems to be a misunderstanding in regard to the varnish which is used over white work, many relying upon white damar varnish in order to keep the pure white color; others, with the knowledge that damar varnish is not durable, thin down a light-colored carriage varnish with turpentine, applying a thin coat for the same purpose. Now it has been demonstrated that a white job will look better, wear longer, and give better satisfaction when finished in egg-shell gloss, and this done in the following manner: After the job has been colored with one or more coats of pure white-lead, mix and apply as color-and-varnish, either pure white lead or dry zinc in hard drying varnish: give ample time for drying; then rub down with fine pumice-stone, and apply a second coat of the same, adding a little more varnish, but not enough to affect the purity of the color. When dry, rub lightly with pulverized pumice-stone, wash clean, and then rub every part nicely with pulverized rotton stone, being careful to have every part of the same luster. This gives an egg-shell finish to the surface.

If striping or ornamenting is required, this may now be put on, and pencil-varnished over when dry.

RUBBING VARNISH COATS.

There is a certain amount of assimilation between coats of varnish, sufficient to cause them to adhere closely one to the other, providing the proper harmony exists in the varnishes, but this is not perceptible to the rubber, and he may easily rub through one, two or three coats and be able to see each separate layer. Care should *always* be taken not to rub through a coat of varnish, but no very great damage will be done if by accident or want of care the under-coats are laid bare except in the last rubbing, just before the finishing coat is applied, when the spot or spots will be liable to show with the carriage in certain positions.

LITTLE THINGS.

There are a thousand and one little things connected with the painting business that are seldom, if ever, spoken of, or even thought of, by the majority of painters; though if a person will take the trouble to examine closely, he will find that it is these

to the strength of the brush: the nails being clinched on the inside, can never pull out or start. These brushes are in every respect first-class, in addition to the above peculiarities.

Whiting's Patent Brass-bound Brushes.

The success that has attended the manufacture of these brushes has been unprecedented, and this fact speaks louder in their praise than anything that can be said. Brass, as a binding for the better and best grades of flat brushes, is fast superseding leather and the cheaper metals zinc and tin, which rust or corrode when used.

The King Patent Whitewash-Brush.

These brushes are pronounced by practical workmen in this city and elsewhere to be the best brushes they ever used. They are a great improvement over the leather-bound brushes, and in strength and durability they are unequaled. We are also making this line with the peculiar features of the Patent Dictator and Sterling Whitewash described above, thus combining in it all the advantages of both kinds of brushes. When thus constructed, it becomes an object of admiration for the mechanical skill required to make it.

little things which go to make up the first-class finish, which does credit to the skillful workman. The painter who overlooks them will turn out work with a superficial finish, that will not bear close inspection; while he wonders that his work is inferior to that of his more painstaking neighbor across the street.

STAINING OAK GRAINING.

It is sometimes desirable to change the color of oak or other light-colored wood by graining, to something approaching the color of black-walnut, and to do this quickly and at a trifling expense, apply a thin coating of enameled leather dressing, and a beautiful black walnut color will result.

In staining black-walnut or any dark colored woods to a mahogany color, put half an ounce of dragon's-blood into two ounces of good alcohol and shake occasionally: when dissolved put as much of this stain into alcohol as will make the wood the color desired, and go over it with a brush. For fine and other light-colored woods add a little burnt umber to the above stain. To stain rosewood, apply to any light-colored wood a coat of asphaltum, thinned with turpentine, and when dry stain with dragon's-blood, but there will be no grain, merely the color.

If a grain is desired, mix lampblack with beer, and rub with a sponge before finishing with varnish.

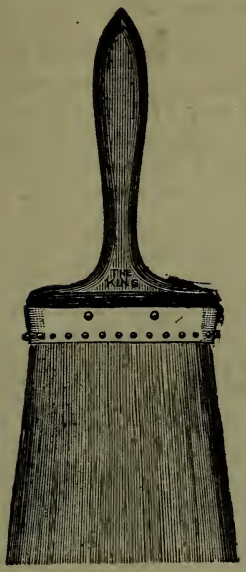
HOW TO REMOVE VARNISH WITHOUT HURTING THE PAINT.

There are several ways of removing varnish from a carriage, and if the operator uses care and judgment in the work he may successfully remove the varnish without injury to the paint surface; but it often occurs that want of care destroys the paint, and necessitates a full repainting. The materials used for the purpose are, in one case, simply spirits of ammonia or hartshorn, which if brushed upon the varnish soon acts upon the oil and softens it so that it may be scraped or rubbed off easily; and in the second strong potash water, or lye, but extreme care must be taken that it does not attack the paint, and besides this, lye is difficult to remove so that new varnish may be put on, for the least particle left upon the surface will injure the finish. Another is a mixture of carbolic acid one pint; creosote one ounce, turpentine a half pint. This may be applied to the work with a soft camel's hair brush which it will not injure in the least, and its action upon varnish is similar to that of spirits of ammonia.

FILLING OLD CRACKS IN PAINT.

The impracticability of effectively concealing the cracks in a painted surface by the application of putty has been fully demon-

The King Patent Wall Paint or Paste Brush.



This brush is made on the same principle as the Patent King Whitewash-Brush, and has the same advantages over the leather-bound brush.

All of our brass-bound brushes are bound with the best quality of that metal. Many brushes of other manufacturers, now on the market, are bound with lacquered tin, or zinc, which has the appearance of brass but is of poor service.

We call particular attention to the extended line which we make of brushes for Artists', Decorators' and fine Varnishers' use, covering everything that is required. Our prices are the lowest, consistent with best quality goods. We make a specialty of Quill Pencils for Druggists' and Artists' use, also all kinds for Lettering and Striping. Our line of Bristle and Badger Shaving Brushes is complete, and prices on them, as everything else, guaranteed satisfactory.

In no kind of brushes is it so necessary for the buyer to be in-

strated by many of the best carriage painters in the country, and yet there are those who believe that they can do such work successfully. There have been several "crack-fillers" or roughstuffs put in the market, which, it was said would fill up the cracks in an old carriage body, so that they would not again appear, but I have yet to see a job done with any of these nostrums that will not show the old cracks in time. The best way to get rid of old cracks is to scrape, burn, or otherwise remove the old paint, then re-paint in the same manner as if it were a new job.

GILDING ON GLASS.

The size for this work is quite different from that used upon other surfaces. Varnish, oil, etc., can not be used. Procure some Russian isinglass, a few shreds of which, say what could be taken in a pinch between two fingers and thumb, being sufficient to make a quart of size. Put the isinglass into a clean vessel, and pour upon it a quart of boiling water, allow it to boil until the isinglass is all dissolved, and it will be ready for use. Next carefully clean the glass with whiting and water, rubbing dry with tissue paper. If the glass is not well cleansed from grease, the size will crawl, and poor work result. Next, paint upon the *front* of the glass the lettering desired with oily black. This need not be carefully done, the object being simply to make a guide in forming the letters on the back of the glass. When the guide letters are made as desired, take a 2½ inch camel's-hair mottler and flow plentifully the thin watery size upon the *inside or back of the glass*, passing the brush over the back of the lines of letters and doing but a portion at a time. No fear need be had of its running down the glass upon painted work, as it is perfectly harmless. Begin immediately to lay the gold, having a gilder's cushion on which to cut the gold to a proper size, then lift and carry the cut pieces of leaf to the glass, on which the size is wet, with a tip (a piece of card-board furnished with a thin layer of camel's-hair on one edge,) until all the lettering is covered on the back with gold. Have no care about laying the gold to exactly cover the letter, in fact it should be laid on to cover more than just the limits of the black paint in front. Continue this until all the black is covered, putting on size and laying the leaf continuously, but never once touching any part already gilded. If the size be quite warm the gold will be more brilliant, but care must be taken that it is not too hot, or the glass may be fractured. Allow a few hours for drying, and then, with a wad of soft cotton gently wipe over the gold to remove those pieces not fastened down by the size. If the gilding does not appear solid, or there are many broken places, a second coat may be given in the same manner as at first, but great care must be taken not to pass the brush over any part but once, or the first coating will be disturbed.

fluenced by the reliability of the manufacturer as when buying the finer kinds for Artists' use, and use in the higher grades of colors and varnishes. When buying these kinds of brushes and pencils never buy low-priced ones of unknown manufacturers, but insist on having those made by some manufacturer who has a reputation for making first-class goods. You will save money by so doing, and your work will please your patrons. In these goods, the hair from which they are made is expensive, and the labor also. A

small percentage of inferior hair can be used to adulterate them, and cheapen them greatly, and when this cheap material is made up by a cheap workman, the brush or pencil is perfectly worthless. This is the cause of so-called Sables having no elasticity, hairs twisting and curling, and the brush with a ragged end, or never coming to a point; flowing brushes that leave hairs in every job, if they do not swell up or twist, and the many other faults that may develop in a poor brush. Yet, these brushes when new have the appearance of being all right, and the defects are so carefully con-

When this is dry, take a mixture of lampblack and varnish, or asphaltum, and paint the letters *on the gold*, being guided by those painted in black *on the front*. Let all dry nicely, then with clean water and a soft sponge wash off all superfluous gold, wipe off the black letters on the front and you will find a nicely gilded letter, which you can now shade up on the back of the glass with colors to suit. When all is done and dry, the extreme edges of the shade may be cut true by holding a straight-edge over them, and scratching with a knife.

Another plan of laying out the work, which is easier to many, is to make a pounce pattern, and pounce it backwards on the gold.

Nickel leaf is now much used instead of gold, it being much less expensive, and far superior to silver leaf, in holding its brilliancy.

GOOD RULES IF WELL FOLLOWED.

1. Let the ground or surface to be painted be, at the start, perfectly clean, smooth and well dried.
2. Have all colors well ground and duly mixed.
3. Do not mix much more nor any less paint than is necessary for immediate use.
4. Keep all paints well stirred while the work is going on.
5. Have your paint of the proper thickness, and lay it on as evenly as possible.
6. Do not apply a coat of paint until the preceding one is properly dry.
7. Do not, if possible, employ a light color over a darker one.
8. Do not add dryers to colors long before they are used.
9. Avoid using an excess of dryers.
10. Always keep pigments in a dry place, as dampness will affect the shade of colors, and also their drying qualities.
11. Never use a paint or varnish brush as a duster.
12. Never keep new paint or varnish brushes in a warm, dry place, as the best made ones are liable to shrink and come apart.
13. Never put a new brush in newly-slaked lime, as it always destroys the bristles.
14. Never use the shammy as a towel, to dry the hands and face upon.
15. Don't wash your hands in the pail used in rubbing with pumice, or for washing bodies and gears.
16. Never leave oily rags lying around the shop, they are liable to spontaneous combustion.

BRUSHES FOR CARRIAGE PAINTERS.

For color coats, such as black, brown, green, etc., either on bodies or gears, use the double-thick camel's-hair blender or mot-

cealed, that it takes an expert to discover them. We manufacture all kinds of brushes and pencils for Artists', Decorators', and fine Varnishers' use, and the many purposes requiring excellence in every particular. We can suit the most exacting as to quality, and at the lowest possible prices.

The high quality of our goods; which is vouched for by the imitations of others, will be maintained, and the improvements which we have made will make our goods more attractive than ever, and guarantee that they will continue to be the most popular and salable Brushes made. In consequence of the heavy stock of raw material and manufactured goods which we carry, and our extensive facilities for manufacturing, we can fill all orders promptly, and save you the annoyance of delays.

The quality and style of these brushes, like all the other lines previously introduced to the trade, must speak for themselves, and be their own eulogy.

Every brush of every description warranted.

BEWARE OF IMITATIONS.

From the Oil, Paint and Drug Reporter, New-York, Jan. 11, 1882.

Messrs. John L. Whiting & Son, Boston, enjoy the reputation of making the most popular lines of brushes in this country, and their goods are almost sure to be found in every well-regulated store keeping painters' and artists' supplies. Two lines of sash tools lately introduced by Messrs. J. L. Whiting & Son, called the King and Chisel, supply a demand that has long been felt by painters and decorators. The King sash is a round brush, made from nice, stiff bristles, of such quality that it can be used in water colors, or any other, and retain its shape. The Chisel sash is oval shape, broken in ready for use, and works perfectly in paint or varnish. The points of superiority in all the lines that they make are so apparent that their goods must be easy selling, and please both seller and consumer.

tler. For lakes, vermilion or glazing coats, use the badger-hair flowing brush. It is superior to the fitch-hair or the camel's-hair brush, and a more even coating can be produced with it, showing neither laps nor streaks. For varnish on gears or on large panels there is nothing better than the "pearl flowing" varnish brush; this brush is made of all white French bristles, and carries or spreads varnish on the largest panels with the greatest ease. The chisel-pointed bristle brushes, or the badger-hair tools may be used to advantage on any work with varnish, glazing or color-and-varnish. For ordinary painting, such as lead, roughstuff, etc., use either the round or oval varnish brush, our preference being for the latter, as they lay paint more evenly and wear better, while the common paint-brush of the house-painter is not so well adapted to the wants of the carriage painter.

HOW TO RE-VARNISH FURNITURE.

When furniture requires re-varnishing, it should first be well washed with strong soda water to remove every particle of grease. If the old varnish is badly cracked, it will be best to scrape it all off, for the cracks can never be filled or covered so as not to show again. Washing over with spirits of ammonia, will soften the varnish, and it may then be removed easily. If the ammonia be used, scrape off, wash clean with water, then rinse it well with vinegar. Next, take No. 1½ sandpaper and rub the wood well until it is quite smooth. Then apply a coat of No. 1 furniture varnish as evenly as possible, and when that is dry, rub off the gloss with a bunch of curled hair, dust clean, and apply a flowing coat of piano flowing varnish. Old furniture may thus be made to look like new at a trifling expense.

SEVERAL WAYS OF MIXING LAKE.

First, procure one of the many grades of dry color to be found at the dealers', among which I can recommend purple lake, carmine lake, and madder lake. Pulverize the lumps quite fine upon the stone; then mix the powder to a stiff dough with turpentine *only*; put the mass in the mill and add just enough brown japan to liquefy it and cause it to run through the mill easily. It may be necessary in order to make the paint fine to run it through the mill more than once. When ground fine, stir well in the cup, and it is an excellent plan to pour some into a clean cup or bottle and put it away safely for use in making color-and-varnish. The remainder should then have a little raw linseed oil, say a tablespoonful to a pint of paint added to cause it to dry with a subdued gloss, called "egg-shell gloss," upon the work. This feature may be tested easily and quickly by putting a thin coating of paint upon the

thumb-nail and then blowing upon it. If the paint appears to dry too "dead" add a few drops more of oil; if too glossy a very little turpentine, but it is best not to use too much oil the first time. The addition of turpentine to the dry color on the stone in the first instance is not a usual proceeding among painters, but a long experience and careful noting of results has given this method the preference. The reason or theory of it is, that the turpentine being very penetrating, it soaks into each tiny grain of pigment, softening it and rendering the paint finer than when oil or japan are used. With fine colors such as vermilion, chrome green, ultramarine, etc., it is not of so much importance. The lakes thus mixed may be spread upon a black or brown ground; I prefer the latter. Mix Indian-red and lampblack to form a medium shade of brown. Have this ground in *color*, and not in color-and-varnish as in glazing, for it is *color* and not a glazing that you wish to apply next. Lay the lake on carefully with a camel's-hair brush, and two coats, twelve hours apart, should be sufficient. When the color is dry, prepare some color-and-varnish, by mixing the dead color which was previously put away in a bottle or cup, with a little carriage rubbing varnish, stir well, and apply with a badger-hair brush. When dry, lightly rub with pulverized pumice-stone and finish as usual, always bearing in mind that to preserve the beauty of a delicate color too much clear varnish must not be used over it.

2. Prepare a ground of dark brown with Indian-red and black; get it into color-and-varnish and rub down smooth. Then grind a small quantity of either of the lakes in carriage rubbing varnish to form a glazing, apply two coats of this over the brown ground and finish as usual.

3. On a dark-brown ground, glaze with carmine. This latter method of making a lake color is practiced extensively in New-York, and is one of the cheapest and least troublesome ways of doing work.

To change the tone of a lake, the two pigments, ultramarine and carmine, are ever ready. Use the former to darken, the latter to lighten, or by mixing the two together a purple or deep lake color may be produced.

French carmine No. 40 is considered the best brand for the carriage painter's use, and is obtained from the dealer in broken lumps or powder.

Lake mixed with white gives beautiful rose tints, or when blue is added, purple tints.

STENCILING.

Ornamental painting on walls and ceilings in imitation of fresco work is very fashionable, and very easily done, as the stencil patterns can be procured at almost any supply store at a trifling ex-

pense. After the wall has been kalsomined, by putting on a border or panel ornament in colors, which adds much to the appearance of the room, a very handsome finish may be made. The colors for such work may be purchased at about the following rates :

Raw umber,	18 cts. per lb.
Burnt umber,	18 cts. per lb.
Raw sienna,	18 cts. per lb.
Burnt sienna,	18 cts. per lb.
Vandyke brown,	20 cts. per lb.
Drop black,	20 cts. per lb.
Venetian red,	15 cts. per lb.
French ochre,	10 cts. per lb.
Chrome yellow,	35 cts. per lb.
Silk green,	35 cts. per lb.
Indian red,	25 cts. per lb.

These colors are ground in size, and are ready for immediate use. The ornamentation of a room may be thus carried out by a novice, all that is necessary being care in the handling of the stencil brush. It is a good plan to have a piece of pasteboard at hand on which to rub the brush, to prevent so much color being applied, as to make the edges of the stencil thick or ragged. If a stencil pattern cannot be easily procured, one can be made in the following manner :

Fold a sheet of writing paper, allowing the fold to form the center of the pattern, then sketch out any desired design making provision for bars to hold the several parts together. This done, lay the paper upon a piece of glass, and with a sharp knife cut out the pattern. The glass will be found to give a smooth edge, and will not dull the knife. Stencils should be varnished with shellac varnish, to prevent the absorption of moisture when in use, and to make them easy to clean.

MIXING STRIPING COLORS.

For pure white striping many use flake or Kremnitz white in tubes, but I have always found tube colors to be *short*, that is, they would not flow readily from the pencil. A short paint may be known by its dropping in lumps or patches from the palette-knife when lifted and held over the cup, and a flowing paint is known by its running in a continuous stream when thus lifted from the vessel containing it. Short paint will spread nicely with a brush but it does not answer so well for striping. To prove this, mix some ultramarine blue with pure raw linseed oil, then add a few drops of water and mix well on the stone with the palette-knife. It will be found to thicken and possess the property of shortness spoken of, and although one may letter or ornament with it, he

cannot draw a good line of striping. Therefore, it is well to use varnish, japan and turpentine in such proportions that the paint will flow readily from the pencil.

Striping color should be ground as fine as possible, and where a good stone and muller is at hand the striper need never complain of coarse paint, for a little labor is all that is necessary.

White may be made of dry lead or zinc, but in every case where a pure white is desired, a very little lampblack should be mixed with it. This makes the white cover more solidly, and prevents all show of laps, where connections are made, and gives a whiter job.

Red striping is best done with *light* English vermilion, the *deep* vermilion being a poor covering color. Vermilion should be mixed with quick drying varnish and turpentine, for if mixed with oil it will quickly turn to an Indian red. Most striping on fine carriages when done with vermilion, is glazed over with carmine to enrich the color and take off its raw appearance.

Blue striping is generally done by the use of Prussian blue and white, making a light blue, then the stripes are glazed over with ultramarine, as in the case of vermilion.

Green striping may be done with pure chrome, or chrome green and white. Green is a very fashionable color on heavy work, although extensively used on every grade from a sulky to a farm wagon. It may be mixed with japan, turpentine and oil, to work easily under the pencil.

PRIMROSE YELLOW.

Primrose yellow is a term applied by English painters to the pale yellow tint of the English primrose. The color may be produced by adding a little white to lemon yellow or king's yellow. If used as a striping, it is necessary to double coat it. For it has but little body, and unless this is done the laps or connections will show plainly. Primrose yellow is a very fashionable color in England, and seems to be growing in favor in this country.

TO MAKE A NICE SIGN.

Take a piece of new zinc or tin of the requisite size, and if not bright and smooth, polish it with whiting or rotten-stone and water. Then give the face side a thin coating of French shellac varnish, or white copal varnish (this to prevent oxidation of the metal,) and let dry. Then carefully lay out the letters, and "cut them in," *i. e.* paint all outside, leaving the letters, which will give the appearance of silver. The paint may be color, or it may be smalt; the latter, if neatly done, makes a fine finish.

If the polished tin be lacquered with gold lacquer a beautiful gold letter will result. A border one-half inch in width, at least, should be made around the edge of the tin.

HOW TO USE RUBBING-STONE.

Although to the professional painter it may seem needless to attempt to tell how to use rubbing stone, a few suggestions or general directions may prove acceptable to the novice or amateur.

The stone having been chosen, the pieces should be cut with an old saw, and a half-round file, into various convenient shapes, such as square, oval, triangular, concave and convex, to approximate the shape of the panels and moldings on which it is to be used. When this has been done, have a pail of water and a soft sponge at hand to keep the surface well wet while the rubbing is going on. The stone should fit nicely to the surface, and be moved either in circles as in polishing, or lengthwise with the panel, pressing firmly upon it, but not too hard, for that would rag or tear up the paint. Plenty of water should be used, to prevent heating. One reason why machinery cannot be used in rubbing is, that the centrifugal force drives out the water from under the stone, and thus leads to heating.

As the work continues, the stone should be pressed more and more lightly, and more water should be used as the painter approaches the completion of his work, in order to decrease the number of small scratches made by the stone.

When rubbing a molded panel, the molding should be first done, so that when the panel is rubbed no groove shall be formed near the edge of the molding, which will often happen if the panel is rubbed before the molding.

When all is finished, wash off clean, and dry well with a shammy; then stand the job aside until the next day for the moisture to dry out. Many troubles occur from coating over a rubbed surface which is not thoroughly dry, and great care should therefore be taken in this particular.

PREPARING A JOB.

Joiners' work, and especially pine, should be well cleaned with glass paper and by scraping until all roughness is removed. This is the joiners' duty, but it is often neglected, and the painter must attend to it. It is sometimes advisable to raise the grain of rough spots by wetting with a sponge and warm water, and then smoothing down again with glass paper, before polishing with wax, varnish or hard-oil finish, and the good appearance of the work will be in proportion to the time and labor expended in the process.

Knots and other places where the turpentine contained in the wood oozes out, should be treated with a composition made of red-lead, size and turpentine, to which a small quantity of linseed oil is sometimes added. This prevents the knots from being seen through the paint. Shellac varnish is also used for the same purpose, but the composition is to be preferred.

Great care must also be taken in preparing the surface of wood for graining, as every defect is rendered more distinctly visible under a delicate graining than when covered by successive coats of paint. And, moreover, work thoroughly prepared will not only look better, but the color will not be as apt to chip and peel off, as when the surface is not properly leveled.

THE USE OF VARNISH BY HOUSE PAINTERS.

Probably not one house-painter in a hundred can do a good job of varnishing, for the reason that he invariably dilutes his varnish with oil or turpentine, indicating either an inferior quality of varnish, or ignorance in its use. All good copal varnish, such as carriage rubbing and finishing from reputable makers, is supplied with all the turpentine it requires before leaving the factory, and this is added to the melted gum and oil, while yet quite hot. If then turpentine or oil is added to varnish when cold, there is a want of assimilation between the ingredients, and an undue amount of oil and gum appears in one place, as compared with another. This tampering with varnish is unjust to the maker, who prepares his goods by a correct formula, and it frequently occurs that such work has to be done over.

The carriage-painter could never turn from his hand such mirror-like surfaces as those we see, if he were to dilute his varnish. He knows how to apply it as poured from the can, and in order to do good work the house-painter must learn to do the same.

TO STAIN WOOD IN IMITATION OF EBONY.

Wash the wood repeatedly with a solution of sulphate of iron ; let dry, and then apply a hot decoction of logwood and nutgalls two or three times. When this is dry wipe it with a wet sponge, and when dry again polish with oil.

PAINTING CARVED SIGNS.

I have been repeatedly asked by house painters how to paint sign work, particularly carved signs, in the same manner that a carriage painter would do the work. As there is a great difference between the methods employed by the house and sign painter, and the carriage painter, the former using oil to a great extent, the latter but a trifling amount, the house and sign painter's method could not be carried out successfully.

Carved signs, *i. e.* signs in which the lettering is sunken, the letters being gilded and the flat surface painted in black or colors, are in great demand, and as the surface must be in what is known as egg-shell gloss, and perfectly smooth, like marble, the carriage painter's mode of procedure is considered best.

The sign board having been nicely carved and smoothed, the priming is first in order. Take white-lead and mix it quite thin with pure raw linseed oil, then add a very little brown japan to hasten the drying, and spread it with a stiff bristle brush so that it may be well rubbed into the grain of the wood. Allow 24 hours for drying, then mix keg lead one part, dry lead one part, with brown japan and turpentine to a stiff paste, just so that it can be spread with a brush, and coat the board with this, doing every part, the depressed letters as well as the flat surface.

Then immediately go over it with a broad-bladed putty knife and plaster it into the pores of the wood, scraping off all superfluous paint, and setting aside for drying, which will take 12 hours at least. When dry, give the whole a good rubbing with No. 2 sandpaper, dust off and apply a coat of color. Ivory black may be mixed as already spoken of in these pages, or it may be purchased ready mixed in japan, *no oil.* Lay the black on with a camel's-hair brush, so that it is free from streaks and brush marks, and the coating should not be too heavy. This paint should dry hard in an hour, when a second coat of the same may be put on. When dry, a coat of color-and-varnish should follow, giving 24 hours for drying, then rub the surface with pulverized pumice stone and water, until it is quite smooth. A second coat of color-and-varnish may be given if desired to make an extra job.

The surface being rubbed till perfectly smooth, lay on a coat of carriage finishing varnish, and let dry. Then rub down first with pumice stone and water, and then with pumice stone and oil, until a nice egg-shell gloss is obtained.

Follow the directions given for preventing the gold from adhering, as given on another page of this book, and proceed to gild the carved letters and possibly the beveled edge of the sign board, using oil size as usual with gold signs. When the gilding is done, wash the sign well with cold water, and a very handsome and durable job may be expected.

IVORY BLACK.

Those who purchase prepared black with the expectation of getting an article ready for spreading with the brush, often find the paint is too thick and requires thinning to a proper consistency for the work in hand, and are at a loss to know what to do with it, whether to add oil, turpentine, varnish or japan; and in some cases the paint is spoiled by the vehicle used to dilute it.

To work prepared black properly, open the can of paint and take out into a clean cup the amount likely to be used, adding just enough turpentine to soften it or thin it to a cream-like consistency, stirring it well meanwhile with a flattened stick or putty-knife. Now, take up a drop or two and apply it to the thumb-nail of the left hand, brushing it down level and thin with the finger: blow upon

it to hasten evaporation, and in a second it will appear quite dry, and dead or flat. This is called quick color and is suitable for any hurried job, as it will dry in five minutes; but to make it perfect for coloring the panels of a carriage or for gears, add to the paint a very small quantity of raw linseed oil—say a tablespoonful of oil to a pint of paint—stir all well together, and try the thumb-nail test. The color should now dry with a subdued gloss, not so dead as before, and if so it is in proper condition for laying on. Be careful in the use of oil in color; too much is worse than none at all, while the proper quantity adds durability to the work, and causes it to spread easily over any surface. Camel's-hair brushes are best for laying blacks or fine colors.

PAINTING ON ZINC.

It is frequently the case where signs, or the panels of business wagons made of zinc are painted without due preparation, that the paint will chip off or crack. To make a good job, procure some muriatic acid, of full strength, and drop into it some pieces of zinc, until the acid stops effervescing. Then add an equal quantity of water, and with a sponge tied to a stick, swab over every part of the zinc to be painted. This roughens the surface, and takes off that sort of greasiness which prevents the paint from sticking. Allow the acid to remain a short time, then wash it over with water or vinegar, dry off, and paint as usual. This is an excellent plan, where expensive lettering and ornamental work is to be done, as it effectually prevents the paint from chipping off.

LETTERING AND SCROLLING PENCILS.

Lettering pencils are usually made of sable, ox or camel's hair. The hair of a lettering pencil should not be over one inch long, and many prefer it even shorter. Black sable-hair pencils are best, and consequently the most expensive, owing to the scarcity of the hair from which they are made, it being the tip of the tail of the Russian brown sable, an animal of the weasel family. These pencils are made with quill or tin binding, but I prefer the quill-bound pencil, as there is less liability of the hairs being cut than with the tin. The camel's-hair pencils are quite inexpensive, and except for heavy colors they seem to answer all requirements, but with these they soon lose their elasticity. Ox-hair pencils are now extensively used by manufacturers of cheap furniture and to some extent for other purposes. As their sales are constantly increasing it is fair to suppose that they are giving satisfaction. But for fine wagon work they are rather too stiff and unyielding. The lettering pencil is used for laying size, or color in scrolling, but for shading a scroll a pencil with shorter hair is much to be preferred. All

lettering and scrolling pencils should be kept well greased when not in use and be put away in a box so that the hairs will not get bent, for no matter if by drawing the hairs between the finger and a warm iron they appear to be straightened, the pencil will never again work as well. A good sable pencil will last with proper care, for several years in daily use. Pencils are oftener injured by carelessly rinsing and greasing them, than by actual use, and the painter should remember that a good pencil is always worthy of careful handling.

HOME-MADE TRANSFER ORNAMENTS.

Monograms and other ornaments may be prepared in advance, and frequently much time saved in the process of ornamentation. First procure some soft paper, such as lithographs are generally printed upon. Coat one side of this paper with a mucilage, made by dissolving gum arabic in water, until a thick glossy surface is obtained. Next paint upon the gummed surface any monogram or ornament desired, in the same manner as if doing it upon a panel. When the colors are dry, cut off the piece of paper con-

taining the ornament, and having slightly dampened another portion of the gummed surface, lay the ornament face down upon it, and press firmly. Allow it to remain a while to dry, then dampen the back until the paper is thoroughly wet, and lift it as you would a transfer ornament. The painting will now be found reversed and may be laid away as if it were a decalcomanie to be applied at any time, in the same manner. This plan is frequently pursued where the carriage is in use and cannot be spared long enough to have the painting done in the usual manner.

Good brushes cannot be bought in regular course of trade without costing more than inferior grades. The raw material for good brushes costs more than the finished poor goods. Always buy the Whiting brushes, and you will get the best goods at the lowest possible prices.

From the Oil and Drug Reporter, New-York, Dec. 20th, 1882.

If Messrs. JOHN L. WHITING & SON, of Boston, have not adopted the word "Perfection" as their trade mark, it is not because their brushes do not fully merit that superlative designation. Their line of goods includes brushes of every description, with the exception of hair, tooth and nail brushes. Messrs. Whiting & Son have been untiring in their efforts to perfect the quality of brushes for use in the arts and for domestic uses, and their efforts have been crowned with most flattering success. By directing, at the same time, close attention to improvements in the methods of manufacturing, they have been able to so far economize the cost of production that their greatly improved goods are sold to the user at no increase in price over the ordinary brush. The Whiting paint and varnish brushes are covered by a number of patents relating largely to the fixing of the handle to the bristles, which is the feature of most consequence in determining the durability of the tool. When well-selected stock is thus made up the result is bound to meet the demands of the most exacting painter. There are the full-center, open-center, and combination paint brushes, which vary in price and are intended to meet varying preferences of consumers in different sections of the country. The "combination" is applied largely to varnish brushes, though the "king" of brushes for this work, is the patent-chiseled, with the full-center. The patent "Dictator" and "Sterling" whitewash brushes possess two entirely new features, both practically useful, which are applied to the regular leather-bound whitewash brushes. The open space in the block or head of the brushes serves as a temporary receptacle for the whitewash or other liquid, and therefore renders the brush less likely to leak or drip when being used; while upon dipping the brush or reversing its position, the liquid will readily run out. The other original features add greatly to the strength of the brush: the nails being clinched on the inside, can never pull out or start. These brushes are in every respect first-class, in addition to the above peculiarities. In artists' brushes the Messrs. Whitings' line is complete, and the excellent quality of their goods is attested by a large number of discriminating artists who continually use them. They make a specialty also of quill pencils for druggists, and also bristle and badger shaving-brushes, which are handled by the drug trade. The factory of Messrs. Whiting & Son is the largest of its class in the country, and consumes one-quarter of all the bristles imported into the United States, besides a large portion of the domestic. They carry a very heavy stock of goods and materials, and are enabled to fill orders with the least possible delay, for any quantity or style of brushes included in their extensive catalogue

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